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| Neurogenetics | <p><u>Research Areas of Interest:</u></p> <ul style="list-style-type: none"> • Identification of genes and susceptibility loci for neurological diseases. • Investigation of the pathomechanisms by which genetics variants cause or contribute to risks for neurological diseases. • Develop gene-based assays, diagnostics and therapeutics for neurological disorders. • Develop cutting-edge tools and resources for neurogenetic and neurodevelopment research. • Basic and translational research in neurogenetics and genomics. • Investigation of the genetic basis of normal neural development and function, and perturbations that could lead to neurological disorders. This includes basic developmental studies in neurogenesis and cell fate determination, cell migration, dendritic growth & plasticity, axonal guidance and neurotrophic signaling. • Training of neuroscientists in molecular medicine. • Education of the scientific and lay communities in the ethical, legal and social issues in Neurogenetics. • Engagement of patient and voluntary advocacy groups in partnerships to promote research in Neurogenetics. • Promoting resource and data sharing. |
| Robert Finkelstein finkelsr@ninds.nih.gov | <p><u>Portfolio:</u> Neurofibromatosis, schwannomatosis</p> |
| Katrina Gwinn-Hardy gwinnk@ninds.nih.gov | <p><u>Portfolio:</u> Genetics repository, Sample banking and databasing, Phenotypic data standardization, Sharing of biomaterials and clinical data, Whole Genome association studies, Bioethics, Ataxia, Essential tremor, genetics grants related to linkage analysis and Pharmacogenetics. Genetics of stroke, genetics of aneurysm, genetics of complex diseases, genotype-phenotype analysis in humans. Hydrocephalus, spina bifida, hereditary spastic paraplegia, Neural tube defects, spinal muscular atrophy. Ethical, Legal, and Social Implications of Genetics Research. Developmental and clinical neuroimaging. Bioethics of Clinical Research. Risks of Genetic Research. Data sharing policy.</p> <p><u>Contract:</u> Building a human genetics DNA repository for the Institute. <u>Contract:</u> Pediatric Imaging.</p> |
| D. Jonathan Horsford horsforj@ninds.nih.gov | <p><u>Portfolio:</u> Ataxia-Telangiectasia, DNA repair diseases, neural development. <u>Contract:</u> Gene Expression Nervous System Atlas for Mouse Brain (GENSAT).</p> |
| Gabrielle Leblanc leblancg@ninds.nih.gov | <p><u>Portfolio:</u> Neurogenesis, stem cell development, neural cell migration, lissencephaly, vascular cognitive impairment and dementia, cerebral amyloid angiopathy, angiogenesis (except tumor angiogenesis, which is NENV), perinatal stroke, Down syndrome, attention deficit hyperactivity disorder.</p> |
| Laura Mamounas mamounal@ninds.nih.gov | <p><u>Portfolio:</u> Neurotrophic factors & signaling mechanisms; Signal transduction mechanisms in growth or repair & plasticity; Genetic tools development; Rett Syndrome; Genetics of autism; Tourette Syndrome. <u>Contract:</u> <u>G</u>ene <u>E</u>xpression <u>N</u>ervous <u>S</u>ystem <u>A</u>tlas (GENSAT).</p> |
| Robert Riddle riddler@ninds.nih.gov | <p><u>Portfolio:</u> Developmental neuroscience, axonal guidance, CNS pattern formation, and cell fate determination, mouse models and RNA interference. Fragile X Syndrome. Developmental Disorders of the cerebellum</p> |

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| Danilo Tagle tagled@ninds.nih.gov | <p><u>Portfolio:</u> Scientific Areas include Genetic Resources and Tools Development, Functional and Comparative Genomics, Proteomics, Animal Genetic Models, Gene therapy and Gene delivery, linkage and association studies for Mendelian and complex diseases, Pharmacogenomics and genetic variation. Disease areas include 1) Lysosomal storage diseases including Mucopolysaccharidoses, Mucopolipidoses, Sphingolipidoses; Glycogen Storage diseases, Glycoproteinoses, Lysosomal Transport Disorders, and Neuronal Ceroid Lipofuscinoses, 2) Leukodystrophies: Canavan, Krabbe, Alexander's disease, etc., 3) Mitochondrial disorders: Leigh syndrome, Pearson syndrome, etc., 4) Other Rare metabolic or Orphan Diseases: Ataxia-telangiectasia, Wilson's disease 5) Dystonia</p> |
| Channels, Synapses and Circuits | <p>Research Areas of Interest:</p> <ul style="list-style-type: none"> • Structural and functional studies of signaling molecules of the nervous system, including ion channels, neurotransmitter receptors and transporters, synaptic vesicle and synaptic scaffolding proteins, and signal transduction elements. • Research on channelopathies and their involvement in specific neurological disorders, such as the epilepsies. • Structure and function of central and peripheral synapses; molecular and cellular mechanisms of synaptic transmission; synaptic modulation and plasticity; synaptogenesis, synaptic degeneration, and regeneration. • Specialized biology of the neuromuscular junction in health and disease. • Analysis of simple and complex neural circuits that mediate generation of epileptiform bursts. • Basic and clinical studies of Epilepsy. • Pathogenesis of the muscular dystrophies and translational research and clinical trials for development of new treatment paradigms. • Pathogenesis and treatment of inherited and acquired neuropathies. • Development of new methodologies used to study channels and synapses, including tools for genetic models, gene therapy, high resolution structural studies of membrane proteins. Novel methods for study of protein interactions and the study of neural activity. • Translational research to link results of basic research on channels and synapses to medication development and clinical trials. |
| Margaret Jacobs jacobsm@ninds.nih.gov | <p><u>Portfolio:</u> Basic and clinical studies of Epilepsy (including clinical trials).</p> |
| Edmund Talley talleye@ninds.nih.gov | <p><u>Portfolio:</u> Research on synaptic transmission, plasticity and structure, including studies on synapse development and regeneration.</p> |
| John Porter porterjo@ninds.nih.gov | <p><u>Portfolio:</u> Basic, translational, and clinical studies in muscular dystrophies (Duchenne/Becker, limb girdle, facioscapulohumeral, congenital, oculopharyngeal, and myotonic dystrophy) and inherited/acquired neuropathies. Inflammatory myopathy. Basic structural, cellular, and molecular biology of the neuromuscular junction and their dysfunction in disease, including myasthenia gravis.</p> |
| Shai Silberberg silberbs@ninds.nih.gov | <p><u>Portfolio:</u> Basic research on the structure, function, and regulation of channels, transporters, and pumps (CTP); Physiology and pathophysiology of ion channels and transporters; Channelopathy.</p> |
| Randall Stewart stewartr@ninds.nih.gov | <p><u>Portfolio:</u> Basic structure, function, and biophysics of channels, transporters, and pumps; Channelopathy; Structural biology; Basic studies of epilepsy; Seizure prediction; Study of epileptogenesis utilizing proteomics and DNA microarrays.</p> |

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| Systems & Cognitive Neuroscience | <u>Research Areas of Interest:</u> <ul style="list-style-type: none"> • Research on higher brain functions that underlie complex behaviors such as learning, memory, attention, language, cognition, emotion, movement, and response to pain. • Research in homeostatic regulation of cyclic and appetitive behaviors such as sleep, activity, feeding, and drinking. • Identify risk factors for developmental cognitive disorders. • Develop better methods for assessing behavior and other neurological functions in animal models as a useful model for human conditions. • Analysis of neural circuits and systems that mediate motor control, sensory processing, nociception and cognitive activities, especially circuits and systems with known medical consequences. • Application of novel tools and methodologies for system approaches, including optical recording, neuroimaging, neuroinformatics, advanced in vivo recording and stimulation techniques, and methods for analysis of complex neural signals. |
| Debra Babcock dbabcock@ninds.nih.gov | <u>Portfolio:</u> (1) Neural mechanisms of cognition, (2) Integrative approaches in behavioral and cognitive neuroscience, neurobehavioral disorders and all aspects of central nervous system plasticity, (3) Neuroimaging, (4) Systems Neuroscience research, (5) Clinical Neurophysiology. |
| Daofen Chen chend@ninds.nih.gov | <u>Portfolio:</u> (1) Neural circuits at system level, (2) Sensorimotor functions, and adaptive and rehabilitative strategies for movement disorders and stroke sequelae, (3) Imaging and device-based technologies for systems neuroscience. |
| Merrill Mitler mitterm@ninds.nih.gov | <u>Portfolio:</u> (1) CNS homeostatic regulation of sleep, circadian rhythms, feeding and body weight (2) Sleep in neurological disorders such as Parkinson's disease and stroke, (3) Neurobiology of obesity and complications of obesity-related disorders such as diabetes and sleep-disordered breathing (4) Neuroendocrinology. |
| Linda Porter porterl@ninds.nih.gov | <u>Portfolio:</u> (1) Peripheral and central mechanisms of chronic pain, (2) Anatomy and physiology of pain signaling and pathways, (3) Analgesic and instrumentation development for pain management, (4) Neuroimaging in pain research, (5) Painful conditions and pain associated with disease states, (6) Genomic and proteomic approaches to pain research, (7) Neural plasticity related to chronic pain conditions, and 8) cognitive aspects of pain perception. |

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| Repair & Plasticity | <u>Research Areas of Interest:</u> <ul style="list-style-type: none"> • Mechanisms contributing to injury and repair of the brain and spinal cord. • Neural plasticity in the adult nervous system. • Restoration of function in neurologically disabled individuals. • Stem and progenitor cell biology in the development and repair of the nervous system. |
| Ramona Hicks hicksra@ninds.nih.gov | <u>Portfolio:</u> (1) Basic and clinical studies that relate to traumatic brain injury (TBI), including mechanisms of injury in the acute and chronic stages; (2) Cognitive/emotional domains affected by head injury or stroke; (3) Use of imaging technology to assess cognitive/behavioral changes after TBI; and (4) Mechanisms of cell death or injury in the brain after ischemia or hypoxia. |
| Naomi Kleitman kleitman@ninds.nih.gov | <u>Portfolio:</u> Spinal cord injury/disease (SCI) and peripheral nerve repair: (1) Cell transplantation to stimulate regeneration, using trophic factors, providing a bridge for regenerating axons, replacing lost neurons; (2) Delivering factors to promote regeneration or block inhibition; (3) Recovery of function by preserving or regenerating specific cord tracts; (4) De/remyelination as it relates to loss or recovery of function after SCI (and glial cell transplantation). |
| David Owens owensd@ninds.nih.gov | <u>Portfolio:</u> Stem cells in the nervous system including: (1) Understanding the basic biology of stem and progenitor cells in the normal nervous system, and following damage or disease; (2) Application of stem cells in developing treatments for the repair of the nervous system; (3) Endogenous neurogenesis in development and adulthood; (4) Tissue engineering approaches to repair the CNS. |
| Joseph Pancrazio pancrazj@ninds.nih.gov | <u>Portfolio:</u> (1) Neural engineering , neural prostheses, neural technology; (2) Neural repair, plasticity in neural systems, machine interfaces and implanted devices, novel biomaterials for repair; (3) Bioengineering applied to the nervous system, nanotechnology for the nervous system, neural control and processing of neural information. |

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| Neurodegeneration | <u>Research Areas of Interest:</u> <ul style="list-style-type: none"> • Parkinsonian Diseases (PD), including early onset forms, corticobasal degeneration, progressive supranuclear palsy. • Alzheimer's disease (AD), as well as frontotemporal dementias, and Lewy body dementias. • Amyotrophic Lateral Sclerosis (ALS), as well as other adult-onset motor neuron disease including ALS-dementia complex of Guam. • Huntington's disease (HD), as well as adult onset trinucleotide repeat disorders and ataxias. • Other adult onset neurodegenerative disorders such as Multiple System Atrophy, Pick's Disease, Hallevorden-Spatz disease, tauopathies, synucleinopathies and amyloidopathies. |
| Diane Murphy murphyd@ninds.nih.gov | <u>Portfolio:</u> (1) Alzheimer's disease – genetic/molecular studies (2) Parkinson's disease: overall portfolio management, basic genetic, molecular and cell biology, stem cells, vaccines, gene therapy (3) basic science and pathology of corticobasal degeneration, Multiple system atrophy, Picks' and Progressive supranuclear palsy, tauopathies (4) biophysical studies of amyloidosis. Manages PD-DOC. |
| Eugene Oliver oliverg@ninds.nih.gov | <u>Portfolio:</u> (1) Clinical and basic research directed toward understanding Huntington's disease and related adult onset triplet repeat disorders, (2) Clinical studies of Parkinson's disease, and Huntington's disease, (3) Cellular and circuit level studies of PD including Deep Brain Stimulation. |
| Larry Refolo refolol@ninds.nih.gov | <u>Portfolio:</u> (1) Pathogenesis of ALS and ALS-dementia complex of Guam; (2) Majority of basic studies of AD, including animal modeling, neurotrophic factors, neurotransmitters, APP, PS1, ApoE, etc. (3) Basic studies of Parkinson's focused on mitochondrial pathologies, energetics, and animal models. Manages PD Animal Model Facility. |

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| Neural Environment | <p><u>Research Areas of Interest:</u></p> <ul style="list-style-type: none"> • Development and normal functions of glial cells including myelin formation, microglial function, astrocyte function and cell-cell communication among the diverse cell populations of the nervous system. • Cellular, infectious, immune, and inflammatory mechanisms in nervous system disorders such as multiple sclerosis, prion diseases, brain tumor, stroke and neuroAIDS. • Identify the molecular mechanisms of cell injury and death in the nervous system. • Vascular mechanisms of neurological disorders, CNS vascular development and the role of microvascular endothelia, extra-cellular matrix and cells of hematopoietic origin within the central nervous system. • Development of diagnostics and of therapies that will prevent, arrest or reverse autoimmune neurological disorders such as multiple sclerosis. • Mechanisms of blood-brain and brain-CSF barrier functions and of cell migration (and/or trafficking) into the CNS in stroke, immune disorders and CNS infections. • Development of animal models for infectious and immune disorders and stroke (e.g. transgenic or knockout/in models, viral models). • Study of biomarkers for vascular, and immune diseases of the nervous system. • Bi-directional translational research that transfers insights gained from basic research and clinical investigations. |
| Jane Fountain fountai@ninds.nih.gov | <p><u>Portfolio:</u> (1) Brain Tumor, (2) Tuberous Sclerosis (3) Glial Cell Biology (Stem cells, cell growth and differentiation)</p> |
| Eugene Golanov golanove@ninds.nih.gov | <p><u>Portfolio:</u> (1) Neuronal mechanisms in stroke; (2) Hemorrhagic Stroke (3) Apoptosis and cell death mechanisms in the nervous system; (4) Neuroprotection and brain hypoxia/ischemia; (5) Regulation of cerebral blood flow</p> |
| Tom Jacobs jacobst@ninds.nih.gov | <p><u>Portfolio:</u> (1) Ischemic Stroke; (2) Blood-brain barrier; (3) Glial cell biology (Astrocyte) (4) Neuron-Glial-Endothelial Interactions; (5) Cerebrovascular Biology.</p> |
| Michael Nunn nunnm@ninds.nih.gov | <p><u>Portfolio:</u> (1) Neuro-AIDS; (2) Infectious diseases of the nervous system, including Creutzfeldt-Jakob Disease and other transmissible encephalopathies, bacterial, fungal and parasitic infections; (3) Neurovirology; (4) Glial cell biology (Microglia; Glial mediated inflammation).</p> |
| Ursula Utz utzu@ninds.nih.gov | <p><u>Portfolio:</u> (1) Multiple Sclerosis (including clinical trials, translational research, animal models of MS, e.g., Theiler's virus and MHV); (2) Neuroimmunology; (3) Systemic lupus erythematosus, and other autoimmune diseases; (4) Glial cell biology (Oligodendrocytes; Myelin formation and repair; Myelin mutants; Glial mediated inflammation).</p> |

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| Clinical Trials | <u>Research Areas of Interest:</u> <ul style="list-style-type: none"> • Development of clinical interventions for neurological disorders and stroke. • Translation of findings in the laboratory to clinical research and clinical interventions. • Innovation in clinical research methodology and protection of human subjects. |
| Robin Conwit conwitr@ninds.nih.gov | <u>Portfolio:</u> Clinical trials involving neuroprotection and intervention studies; ALS and other neuromuscular diseases; emergency clinical trials |
| Janice Cordell cordellj@ninds.nih.gov | <u>Portfolio interests:</u> Clinical trials and epidemiological studies, clinical trial design and monitoring, and clinical research methodology. |
| Wendy Galpern galpernw@ninds.nih.gov | <u>Portfolio:</u> Clinical trials for neurodegenerative disorders and movement disorders; experimental therapeutics. |
| Laurie Gutmann gutmanl@ninds.nih.gov | <u>Portfolio:</u> Clinical trials in myopathies, neuropathies. |
| Peter Gilbert gilbertp@ninds.nih.gov | <u>Portfolio:</u> Research grants in biostatistics and clinical trial design, monitoring and analysis, and training grants in biostatistics. |
| Deborah Hirtz hirtzd@ninds.nih.gov | <u>Portfolio:</u> Clinical studies (trials, epidemiology, etc.) related to cerebral palsy prevention, stroke in infants and children, and other pediatric clinical research: autism, pediatric epilepsy, and pediatric head trauma. |
| Scott Janis janiss@ninds.nih.gov | <u>Portfolio:</u> Clinical trials and epidemiology studies in stroke and traumatic brain injury; SPOTRIAS acute stroke network; clinical trial design and monitoring; and clinical research methods. |
| John Marler marlerj@ninds.nih.gov | <u>Portfolio:</u> Clinical trials Design, clinical trial networks, stroke, statistics, neurodegeneration. |
| Claudia Moy moyc@ninds.nih.gov | <u>Portfolio:</u> Clinical trials and epidemiology studies in stroke, cerebrovascular disease, and other neurological disorders; quality of life and other patient-reported outcome measures in clinical trials; clinical trial design and monitoring; clinical research methods; clinical trials training; ethical issues in clinical research |
| Joanne Odenkirchen odenkirj@ninds.nih.gov | <u>Portfolio Interests:</u> Clinical trials and epidemiological studies, clinical trial design and monitoring, recruitment and retention issues related to clinical research, international clinical research, and clinical research methodology. |
| (Vacant) | <u>Portfolio:</u> Clinical trials and population-based studies on stroke prevention and acute stroke treatment. Medical, social, and behavioral determinants of stroke risk and stroke disparities. Stroke risk assessment. Application of evidence-based stroke care guidelines in healthcare settings. |

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| Technology Development | <u>Research Areas of Interest:</u> <ul style="list-style-type: none"> • Translational research and therapy development programs • Anticonvulsant screening project • High-throughput drug screening • Medicinal Chemistry • Drug candidate libraries • Core Center Grant program coordination • Gene Microarray Consortium coordination • Administrative supplement programs for shared resources • Development and distribution of animal models of disease |
| Jill Heemskerk heemskej@ninds.nih.gov | <u>Portfolio:</u> High Throughput Drug Screening Facility for Neurodegeneration; NIH Clinical Compound Collection (NCC) for public distribution; SMA Therapeutics Development Project; Medicinal Chemistry Service for Neurotherapeutics. |
| David A. Jett jett@ninds.nih.gov | <u>Portfolio:</u> Counterterrorism (CounterACT) Program and Neurotoxicology; CounterACT Research Centers of Excellence and Research Projects; CounterACT SBIR Program; Preclinical Development Contract; CounterACT ASP Component; InterAgency Collaboration with DoD (IAA). |
| Yuan Liu liuyuan@ninds.nih.gov | <u>Portfolio:</u> Computational Neuroscience and Neuroinformatics Programs and Initiatives including: <ul style="list-style-type: none"> • Interagency (NIH, NSF, ONR, NSA) Collaborative Research in Computational Neuroscience (CRCNS) • Interagency (NIH, NSF, NASA & DOE) Multi-Scale Modeling and Analysis Initiative • Trans-NIH Bioinformatics Science & Technology Initiative (BISTI) • Trans-NIH Neuroimaging Informatics Technology Initiative (NIFTI) • Neuroscience Information Framework (Blueprint) • National Centers for Biomedical Computing (Roadmap) |
| Thomas Miller millert@ninds.nih.gov | Preclinical Development of Therapeutics Research Infrastructure <u>Portfolio:</u> Microarray Centers; P30 Center Core Grants. |
| Mark Scheideler scheideler@ninds.nih.gov | <u>Portfolio:</u> --Roadmap Molecular Libraries Assay Development for HTS Program. --Roadmap Molecular Libraries Initiative Project Team. --Roadmap Molecular Libraries Screening Center Network. --Development and Implementation of Biomarker Technologies |
| James Stables stablesj@ninds.nih.gov | <u>Portfolio:</u> Anti-Convulsant Screening Program, drug screening libraries/databases, pre-clinical testing and toxicology; Translational activities Model Validation in resistance and Epileptogenesis; Seizure models for pediatric and geriatric populations. |

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| Office of Minority Health and Research | <u>Research Areas of Interest:</u> <ul style="list-style-type: none"> • Health disparities-related research (stroke, NeuroAIDS, NeuroDiabetes, Epilepsy, Brain Injury, etc. • Basic, clinical, translational studies to support new, and/or ongoing neuroscience programs leading to diversity in the scientific workforce and the reduction of disease through research. • Increase extramural community awareness of research and health information gained from NINDS-supported programs and activities. |
| Richard Benson bensonric@ninds.nih.gov | <u>Portfolio:</u> (1) Health Disparities Research and Disease Prevention (2) Stroke Research (3) Specialized Center Cooperative Agreements (SNRPs) (4) Underrepresented Minority Capacity Building and Education (5) Clinical Trials (6) Educational outreach. |
| Alfred Gordon gordona@ninds.nih.gov | Director, Office of Minority Health and Research. Associate Director for Minority Health and Research <u>Portfolio:</u> (1) Center Grants in Health Disparities and Disease Prevention (2) Diversity Capacity Building and Education (3) Clinical Trials (4) Educational Outreach |
| (Vacant) | <u>Portfolio:</u> (1) Specialized Center Cooperative Agreements (SNRPs), (2) Counterterrorism and Neuroscience Research, (3) Career Development Award (Minority K01), (4) Health Disparities (Injury to Developing Brain), (5) Underrepresented Minority and Disability Supplements, (6) Predoctoral NRSA Minority and Disability, (7) Collaborative Neurological Sciences Awards (S11). |
| Michelle Jones-London jonesmiche@ninds.nih.gov | <u>Portfolio:</u> (1) Diversity (Underrepresented Minority, Disadvantaged and Disability) Supplements (2) Re-Entry Supplements (3) R25 Education Programs (including Neuroscience Scholars Program) (4) Career Development Award (Minority K01) (5) Predoctoral (F31) NRSA Minority and Disability (6) Diversity Outreach Conferences (7) Specialized Neuroscience Research Programs |
| John K. Lynch lynchj@ninds.nih.gov | <u>Portfolio:</u> (1) Specialized Center Cooperative Agreements (SNRPs), (2) Collaborative Neurological Sciences Awards (S11), (3) R25 Education Programs (including Neuroscience Scholars Program), <u>Research Interests:</u> (1) Stroke, (2) Pediatric Neurological Disorders, (3) Neuroepidemiology, (4) Health Disparities, (5) Clinical trials and population based studies, (6) neurogenetics. |

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| Training and Career Development | <u>Research Areas of Interest:</u> All scientific areas of the Institute. The Training Office is responsible for the development, implementation and maintenance of programs for training and career development of neuroscience researchers. |
| Stephen Korn korns@ninds.nih.gov | <u>Portfolio:</u> Institutional Training Programs (T32s); All inquiries about training mechanisms except for questions about scientific relevance to the NINDS mission. Inquiries about the Pathway to Independence Award (K99/R00). |

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| Office of International Activities | <u>Research Areas of Interest:</u> <ul style="list-style-type: none"> • Develop creative approaches to promote international research in the neurosciences • Stimulate international activities with other NIH ICs, other domestic and foreign governmental agencies and non-governmental organizations • Encourage international neuroscience collaborations, training and capacity building through grants, short-term travel supplements and international conferences |
| Yuan Liu liuyuan@ninds.nih.gov | <u>Portfolio:</u> Trans-NIH and NINDS International Programs and Initiatives including: <ul style="list-style-type: none"> • Brain Disorders in the Developing World • Fogarty International Research Collaboration Awards (FIRCA) • Global Health Research Initiative Program for New Foreign Investigators (GRIP) • International Clinical, Operational, and Health Services Research and Training Award (ICOHRTA) • International Bioethics Education and Career Development Award • US-Japan Brain Research Cooperative Program (BRCP) • International Neuroscience Fellowship Program (F05) |